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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,857	05/06/2002	Shinichi Yoshimura	113278-007	6313

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EXAMINER	
TRAN, TAM D	

ART UNIT	PAPER NUMBER
2676	

DATE MAILED: 09/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/009,857	YOSHIMURA ET AL.	
	Examiner	Art Unit	
	Tam D. Tran	2676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 July 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *16-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *16-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 16-33 are rejected under 35 U. S.C. 103(a) as being unpatentable over Mori (USPN 5276521) in view of Gontowski, Jr. et al. (USPN 4454416), hereinafter simply Mori and Gontowski.

2. In regard to claims 16, 22, 28, Mori teaches a picture processing apparatus, comprising: a light receiving portion (light receiving element CMD) for generating an electric signal corresponding to an intensity of a received light; a plurality of storing portions (storage circuit 6, 26), wherein each of the storing portions stores, as a current signal, see Fig.5, col.6 lines 10-40; a load portion (current-voltage conversion type pre-amplifier 22, 34) for converting the current signal stored by each of the storing portions into a voltage signal; see col.5 lines 34-38; a bias portion for supplying an offset current to an input of the load portion (dark-state offset current subject to current-voltage conversion by the preamplifier 22, 34); a calculating portion (differential amplifier 36) for calculating an output signal of the load portion based on the voltage signal converted by the load portion; see Fig.5, col.8 lines 1-27; and an outputting portion for outputting a calculated result of the calculating portion (signal output). Mori does not

teach an amplifying portion for amplifying the electric signal generating by the light-receiving portion. However, Gontowski teaches an amplifying portion for amplifying the electric signal generating by the light-receiving portion (photo diode), see Fig.1, col.2 lines 5-60. It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the photo-electric circuit of Gontowski into the imaging device of Mori because a combination of Gontowski's circuit and Mori's device would not introduce a non-linearity (error) to transfer characteristic of the amplifier.

3. In regard to claims 17, 23, 29, Mori teaches a picture processing apparatus, wherein the plurality of storing portions store current signals corresponding to the intensity of light received in different time periods, and wherein the calculating portion performs a calculating process using voltage signals from at least two different time periods based on current signals extracted from at least two of the plurality of storing portions (storage circuit 6, 26) . See Fig.5 col.6, lines 10-40

4. In regard to claims 18, 24, 30, Mori teaches a picture processing apparatus, wherein the calculating process comprises at least one of addition, subtraction (differential amplifier), and comparison. See Fig.10, col.9 lines 16-25.

5. In regard to claims, 19, 25, Gontowski teaches a picture processing apparatus, wherein the amplifying portion comprises a first mirror transistor and a second mirror transistor connected such that a gate electrode of the first mirror transistor faces a gate electrode of the second transistor (transistors 11, 12), thereby amplifying the current signal based on current mirror amplification, see Fig.1.

6. In regard to claims 20, 26, 33, Mori teaches a picture processing apparatus, wherein each of the storing portions (storage circuit) includes a current copier circuit for storing the current signal (current storage circuit). See col.5 lines 50-55.

7. In regard to claims 21, 27, 31, 32, Mori teaches a picture processing apparatus, wherein the bias portion supplies an offset current to one of two current signals being compared by the calculating portion, the two current signals being supplied by two of the plurality of storage portions (capacitors). See Fig.5, col.8 lines 1-27.

Response to Arguments

8. Applicant's arguments filed on 7/25/2005, have been fully considered but they are not persuasive.

Applicant argues that the prior art does not teach each pixel comprising storing portion. However, examiner respectfully disagrees with the argument because Fig.3 of Mori shows that each pixel indirectly connecting to current storage circuit, which corresponds to each pixel comprising a storing portion. It will be clarified if applicant claims each portion directly connecting to each other to form a pixel. For these reasons, the rejections are maintained.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tam D. Tran** whose telephone number is **571-272-7793**. The examiner can normally be reached on MON-FRI from 8:30 – 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Matthew Bella** can be reached on **571-272-7778**. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tam Tran
TT
Examiner

Art unit 2676

Matthew C. Bella

MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
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